

IV. TRENDS AFFECTING PUBLIC RECREATION AREAS

INTRODUCTION

Accurate predictions of changes facing North Carolina and their impact on the state and its outdoor recreation needs are important if the state is to meet those needs. Much of what citizens can do today about the future quality of life is dependent upon anticipating future trends and planning accordingly. Major trends that will affect public outdoor recreation follow.

POPULATION GROWTH

The primary trend affecting outdoor recreation in North Carolina has been and continues to be population growth. From April 1990 to April 2000, North Carolina's population increased by 21.4 percent to 8,049,313. During this same ten-year period, the U.S. population increased by 13.2 percent. Roughly 70 percent of North Carolina's growth was the result of net migration into the state. Of the state's residents in 2000, 63 percent were born in North Carolina. Population growth from net migration started increasing in the 1970s as new industries moved into urban areas in North Carolina. These new light industries – high technology, computer, electronic assembly plants, etc. – have grown as some of the state's more traditional employers, such as textiles and agriculture, have declined. The influx of new urban jobs accelerated the movement of the state's population from rural to urban areas.

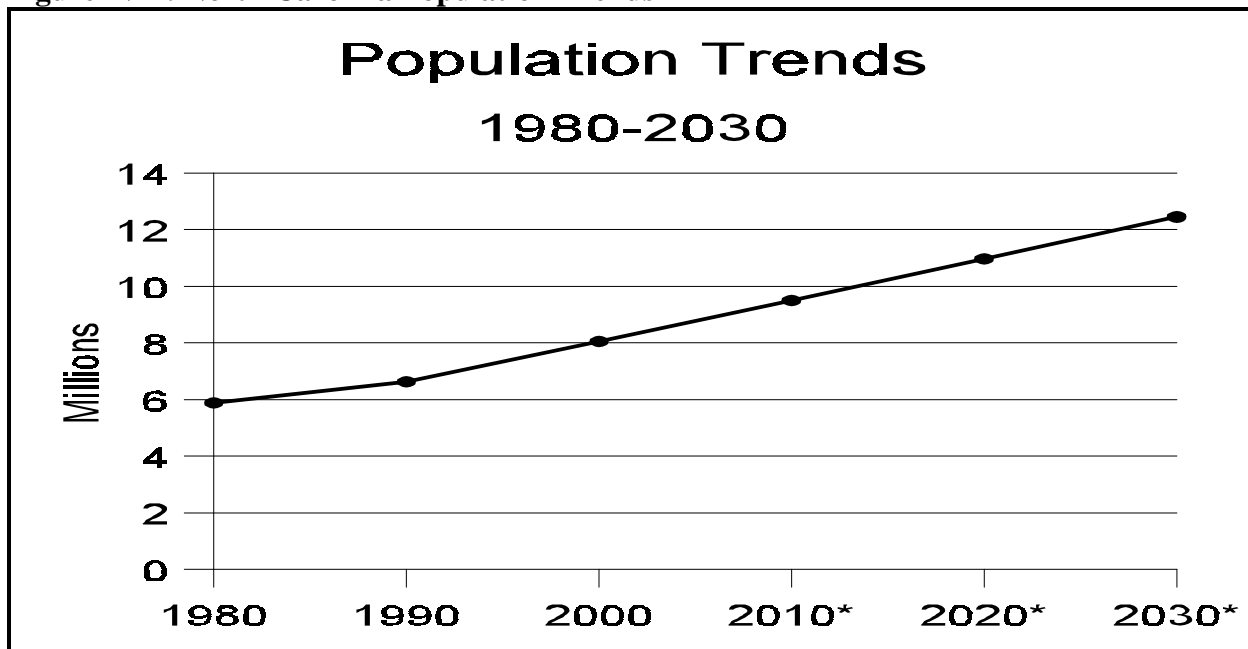
While the rate of population growth is projected to slow somewhat from 2000 to 2010, an estimated 9.49 million North Carolinians will be seeking outdoor recreation opportunities in the Tarheel state by 2010, 1.44 million more than in 2000. By April 2030, North Carolina's population is expected to grow to 12.45 million, 54.6 percent above the year 2000 total, (Figure IV-1). More outdoor recreation areas will be needed to meet the increased demand of a growing population.

INCREASED DEVELOPMENT

Concomitant with population growth, factories, offices, schools, restaurants and shopping centers will be built; new roads will be paved and others widened; and forests and farms will disappear. So in the years to come, not only will more citizens be demanding outdoor recreation areas and facilities, but land available for outdoor recreation will be shrinking as development takes place to accommodate the population growth. Without an increase in recreational areas and facilities, existing ones can be expected to become increasingly crowded and negatively impacted by use and surrounding development. New areas need to be identified and steps taken to acquire them prior to their being impacted by or lost to development.

Large amounts of land have already been developed across the state, particularly in metropolitan areas. Between 1992 and 1997, 781,500 acres of land were developed statewide, roughly 156,000 acres annually. Moreover, the pace of development has increased. From 1982 to 1992, an average of 93,580 acres per year was developed. (Brookings Institution. July, 2000) As North Carolina develops, the struggle to balance economic and population growth with the preservation of the state's natural heritage increases.

Figure IV-1. North Carolina Population Trends



*projected

Source: North Carolina State Demographics Unit

INCREASED PARTICIPATION

In addition to population growth, outdoor recreation demand has also been fueled by increased participation. The 2000 National Survey on Recreation and the Environment (NSRE) and earlier versions of the survey have documented this increase. The NSRE found that 89 percent of people age 16 and older participated in at least one activity in 1982/83; 94.5 percent in 1994/95; and 97.6 percent in 1999/2000. Some of this increase can be attributed to the longer list of activities used in the more recent surveys. Even so, it appears that participation overall is increasing. While there is little room for continued increases in the percentage of persons participating, the trend does not indicate any drop in the rate of participation. Additional recreational lands and facilities are needed to meet the additional demand created by increased participation.

POPULATION SHIFTS

Population shifts that will affect the demand for outdoor recreation areas, facilities and services are also taking place. The primary shift looming on the horizon concerns the growth in elderly population.

Surprising most demographers, the portion of elderly Americans and North Carolinians (age 65 and older) failed to increase during the 1990s, the first time since the Census Bureau began its count that the senior's share of the population fell nationally. In North Carolina, the percentage of elderly dropped from 12.1 percent in 1990 to 12 percent in 2000. (The total number of elderly in North Carolina increased by 169,000 or 21.1 percent in the 1990-2000 decade, slightly slower than the overall population growth.) From 2000 to 2010, the 65-and-over ranks will likely expand no faster than the rest of the population, a result due primarily to declining births that accompanied the Great Depression of the 1930s.

The population as a whole continues to age. With the leading edge of the post-war baby-boom generation reaching 55, the median age in North Carolina rose from 33.1 in 1990 to 35.3 years in 2000. In the next decade, as the oldest baby-boomers hit 65, the median age will continue to rise, heralding a rapid jump in the elderly population. By 2030, the median age in North Carolina will likely hit 38.4 years.

Between 2010 and 2020, the number of citizens 65 and older is projected to increase by 35 percent. The Census 2000 numbers hint at the future, showing that the fastest gain of any age group occurred in the 45-to-54 year-old segment, up 50 percent in North Carolina during the 1990s. Although not in the immediate future, this population shift, when it occurs, will produce a flood of retirements. Retired persons often have more free time than other adults, and, to a lesser extent, more financial resources. Lack of time and financial resources were the two most frequently cited constraints to participation identified in the 2000 National Survey on Recreation and the Environment.

While the elderly participate in outdoor recreation less frequently than younger persons, they participate more frequently than in past years. An increasing interest in physical fitness and improved health have led to more participation. When higher participation rates are coupled with large increases in the over-65 age group, the elderly will demand services to a much greater degree than they do now.

Increased demand can therefore be expected for activities that have high participation by older Americans. These include walking, sightseeing, attending family gatherings, visiting a beach or waterside, picnicking, visiting a historic site or nature center, birdwatching and attending sporting events. Older Americans also participate in a wide variety of other outdoor recreation activities including wildlife viewing, attending concerts, nature study, fishing, swimming, motor boating, biking and golf. Participation in team sports and other physically demanding activities are, as one might expect, considerably higher for the young and middle-aged than for the elderly. (National Survey on Recreation and the Environment, 2000)

The Census 2000 report also showed a big increase in the number of seniors living past age 85. The number of North Carolinians age 85 and older grew 53.4 percent during the 1990s. This age group is projected to continue increasing much faster than the general population. The increase, however, is not expected to have a noticeable direct impact on outdoor recreation demand.

Nowhere is the aging trend more significant than in the Mountain region of the Tarheel state where it is coupled with the attractiveness of an area known as a retirement haven. North Carolina's mountain counties have the highest median ages in the state (Table IV-1). They also have the highest percentage of age 62 and over population (Table IV-2). Moore County, another popular retirement area, is also high in elderly population. In contrast, Onslow County and several other counties have significantly lower median ages and percentages of elderly population. Some of these counties have their median ages lowered by the impact of young military and college-age populations. Counties should consider their present and projected future population composition and the recreational preferences of various age groups in planning new facilities.

Table IV-1. Counties with Highest and Lowest Median Age*, 2000

Counties with Highest	Age	Counties with Lowest	Age
Clay	46.7 years	Onslow	25 years
Macon	45.2	Cumberland	29.6
Polk	44.9	Watauga	29.9
Cherokee	44.0	Hoke	30.0
Transylvania	43.9		
North Carolina		35.3 years	

*The age at which half the population is older, half younger

Source: U.S. Census Bureau, Census 2000

Table IV-2. Counties with Highest and Lowest Population Age 62 and Over

Counties with Highest	Percentage	Counties with Lowest	Percentage
Polk	26.9 %	Onslow	7.9 %
Clay	26.3	Wake	9.0
Macon	26.2	Hoke	9.5
Transylvania	25.3	Cumberland	9.5
Moore	25.0		
Henderson	24.9		
Cherokee	23.7		
North Carolina		14.4 %	

Source: U.S. Census Bureau, Census 2000

Elderly persons are generally more concerned than others with the safety, quality and accessibility of park facilities. Bus tours, which provide increased mobility and opportunities for socializing, are becoming increasingly popular with the elderly. Large parks should be capable of accommodating bus tours and large school groups by providing adequate facilities and environmental programs. The safety, quality and accessibility of recreational resources should be enhanced to serve the aging population.

LONGER AND HEALTHIER LIVES

People are living longer (Table IV-3). Improved living conditions, medical discoveries, advances in healthcare and knowledge about the effects of lifestyle have all contributed to the longer lives. Questions about how long life spans can be extended through discoveries of biological research are being debated, but the trend of increased life expectancy is projected to continue. Lifestyle choices, including participating in recreation and exercise, can affect an individual's life span.

Table IV-3. Life Expectancy at Birth, 1900-2000

	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Total:	49.2	51.5	56.4	59.2	63.6	68.1	69.9	70.8	73.9	75.4	76.9
Men:	47.9	49.9	55.5	57.7	61.6	65.5	66.8	67.0	70.1	71.8	74.1
Women:	50.7	53.2	57.4	60.9	65.9	71.0	73.2	74.6	77.6	78.8	79.5

Source: National Vital Statistics System

Not only are lives getting longer, but they are likely to be healthier at all ages. Continued improved medical care, drug discoveries, biotechnology advances and technological innovations are expected. Even with millions more people reaching retirement age, the number of people in nursing homes declined nationwide during the 1990s, according to surveys by the Duke Center for Demographic Studies. The Center also found that Medicare recipients are much less likely to be disabled than 20 years ago. Healthy people are more likely to participate in outdoor recreation. With longer and healthier lives, people are remaining active in their chosen activities longer in life, creating additional demand for outdoor recreation areas and facilities.

INCREASED OBESITY

One trend that has a negative impact on outdoor recreation demand is increased obesity. In the United States, obesity has risen at an epidemic rate during the past 20 years. Research indicates that the situation is worsening. The prevalence of overweight among U.S. adults increased 61 percent from 1991-2000, and currently approximately 54 percent of U.S. adults are considered overweight or obese. Addressing overweight and obesity has become a national health objective.

Obesity trends in North Carolina, following national trends, are also worsening. (Obesity is defined as a body mass index greater than or equal to 30, or about 30 pounds overweight for a 5' 4" tall person.) In 1985, less than 10 percent of North Carolina adults were considered obese; in 2000, over 20 percent were. Nationally, 18 percent of adults are obese. Overweight persons generally continue to participate in recreational activities; obese persons, however, tend to participate less frequently in recreation activities. (National Center for Chronic Disease Prevention and Health Promotion, 2000)

Likewise, overweight is also a problem in children and adolescents. In 1999, 13 percent of children aged six to 11 years and 14 percent of adolescents aged 12 to 19 years in the U.S. were overweight. This prevalence has nearly tripled for adolescents in the past 20 years. Moreover, overweight adolescents have a 70 percent chance of becoming overweight or obese adults. (Surgeon General, 2000)

A variety of factors – including behavior, unhealthy diets, disease, environment and genetics – play a role in obesity, making it a complex health issue to address. Overweight and obesity result from an energy imbalance involving eating too many calories and/or insufficient physical activity over a long period of time.

Regular physical activity, whether moderate or strenuous, plays a key role in energy imbalance because it uses up calories consumed. Physical activity is also good for overall health, decreasing the risk for colon cancer, diabetes and high blood pressure. It also contributes to healthy bones, muscles and joints and helps to reduce the pain of arthritis. However, too many adults and children have insufficient physical activity. (National Center for Chronic Disease Prevention and Health Promotion, 2000)

Daily participation in high school physical education classes has dropped, falling from 42 percent in 1991 to 27 percent in 1997, according to the Centers for Disease Control and Prevention. American Sports Data, Inc., in a parallel finding, reported that in 1987, 23.3 percent of all children aged 12-17 participated in a fitness activity on at least 100 occasions. By 1997, only 19.2 percent had done so. This de-emphasis of physical education in schools both contributes to obesity and blunts an enthusiasm for sports, resulting in less participation. (American Sports Data, 2002)

In a 2000 report to the President from the Secretary of Health and Human Services and the Secretary of Education, the nation's young people were described as "...in large measure, inactive, unfit, and increasingly overweight." Physical inactivity over time threatens to reverse progress made in reducing death from cardiovascular diseases and to devastate our national health care budget. The report stated that "enhancing efforts to promote participation in physical activity and sports among young people is a critical national priority." (Promoting Better Health for Young People Through Physical Activity and Sports, 2000.)

The provision of adequate outdoor recreation areas, facilities and programs plays a role in addressing the national and state concerns regarding overweight and obesity. Opportunities for physical activity in communities can encourage families to participate in enjoyable physical activities rather than watch TV or play video games. Both indoor and outdoor recreation areas, facilities and programs near work sites and schools can also encourage participation. More physically active after school care

programs could be offered. Programs that teach skills and organized activities that encourage participation are needed. Media campaigns that promote and inform the public of existing opportunities for participation will also help address overweight and obesity concerns.

ACTIVITY TRENDS

Largely because of population growth, the number of outdoor recreation participants has grown for most activities, creating additional demand for areas and facilities to enjoy the activities. Within this general growth, however, changes in participation levels have and continue to take place as some activities become relatively more popular and others less popular. In addition, there are participants for activities that were rarely pursued 15 or 20 years ago, such as mountain biking, orienteering and jet skiing. Outdoor recreation providers will want to review activity trends in order to meet changing demand and to avoid expending public funds on fads, activities that may suddenly become popular only to quickly lose their appeal.

Long-Term Trends

Birdwatching has had the largest percentage increase of any activity tracked by the National Survey[s] on Recreation and the Environment (NSRE), growing 235.9 percent since 1982. (Table IV-2) The 50 million increase in the number of participants since 1982 has been fueled largely by dramatic increases in the numbers of infrequent birders, those participating ten or fewer days annually. Birding is an exception to most activities the NSRE tracks: for people who engage in particular activities, there has been relatively little or moderate changes in the amount and frequency of individual participation since 1982. Some people participate infrequently in an activity; others may do so much more frequently.

Large percentage increases in hiking (195.9 percent) and backpacking (165.9 percent) were also found. Camping, both primitive and developed, continues to grow in popularity. Developed camping includes staying overnight near roads in developed campgrounds such as those provided by state parks, National Forests or National Parks. Primitive camping includes staying overnight in settings lacking the amenities of developed campgrounds where one must generally carry in water and provide all camping facilities. Walking, the most popular outdoor recreation activity, grew in popularity to the extent that 179 million people now participate. Because almost all people age 16 and over now walk, walking cannot continue to significantly increase its relative popularity.

For almost all of the activities listed on Table IV-4, the percentage of people participating is increasing at a faster rate than the U.S. population, which increased approximately 17 percent from 1982 to 2000. Hunting, outdoor team sports (includes baseball, softball, football, basketball, soccer volleyball and handball) and water skiing all increased at a slower rate than the population grew, and the number of people sailing actually decreased. Sailing usually requires large bodies of water without low bridges or shallow water, therefore provision of additional areas to sail is limited.

Hunting is one of the few steadily declining outdoor recreational activities. According to NSRE data from the 1960s, approximately 16 percent of people aged 12 and over hunted then; in 2000, the percentage had dropped to 11 percent. Declines in the number of hunters are also reported in the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation conducted by the U.S. Census Bureau. In some urban areas, finding convenient and public places to hunt contributes to the decline. Cultural shifts also seem to have played a factor. While hunting has declined, the popularity of viewing birds and wildlife has grown. The percentage of people that fish has remained relatively flat at around 33 percent.

Table IV-4. Activity Increase by Percentage: 1982 to 2000 (ages 16 and older)

Activity	Millions in 1982-83	Growth in millions	Millions in 2000-01	Percentage Growth
Birdwatching	21.2	50.0	71.2	235.9
Hiking	24.7	48.4	73.1	195.9
Backpacking	8.8	14.6	23.4	165.9
Attending an outdoor concert/play	44.2	40.6	84.8	91.9
Walking	93.6	85.4	179.0	91.2
Off-road driving	19.4	17.3	36.7	89.2
Primitive camping	17.7	14.5	32.2	81.9
Developed camping	30.0	22.8	52.8	76.0
Downhill skiing	10.6	7.1	17.7	66.9
Swimming: river, lake or ocean	56.5	36.4	92.9	64.4
Running/jogging	45.9	27.7	73.6	60.3
Golf	23.0	12.9	35.9	56.1
Motor boating	33.6	17.8	51.4	52.9
Cross country skiing	5.3	2.7	8.0	50.9
Attending a sporting event	70.7	35.6	106.3	50.4
Bicycling	56.5	27.4	83.9	48.5
Sightseeing	81.3	32.7	114.0	40.2
Picnicking	84.8	31.8	116.6	37.5
Horseback riding	15.9	5.7	21.6	35.9
Fishing	60.1	12.4	72.5	20.6
Hunting	21.2	2.7	23.9	12.7
Outdoor team sports	42.4	4.5	46.9	10.6
Water skiing	15.9	1.5	17.4	9.4
Sailing	10.6	(0.1)	10.5	(0.9)

Sources: Cordell, Green & Stephens, 2002. Data taken from 1982-83 NSRE and 2000 NSRE. Only activities common to both surveys are shown.

Short-Term Trends

Table IV-5 shows nationwide short-term outdoor recreation participation trends. Activities are ranked by the highest percentage change from 1994 to 2001. Kayaking, snowboarding and jet skiing all grew over 100 percent during this period, according to NSRE data. Windsurfing and volleyball, conversely, dropped almost 20 percent in participants.

Most activities have higher participation, a natural expectation that comes with total population growth. The percentage growth above general population growth – approximately 11.4 percent from 1994 to 2000 in North Carolina – indicates that a higher percentage of the public participated in that activity in 2000-01. This growth in interest may indicate future growth that recreation providers may wish to anticipate. Even so, it should be stressed that traditional activities remain hugely popular. Popular activities like walking, picnicking or visiting the beach simply have less growth potential because they are already immensely popular.

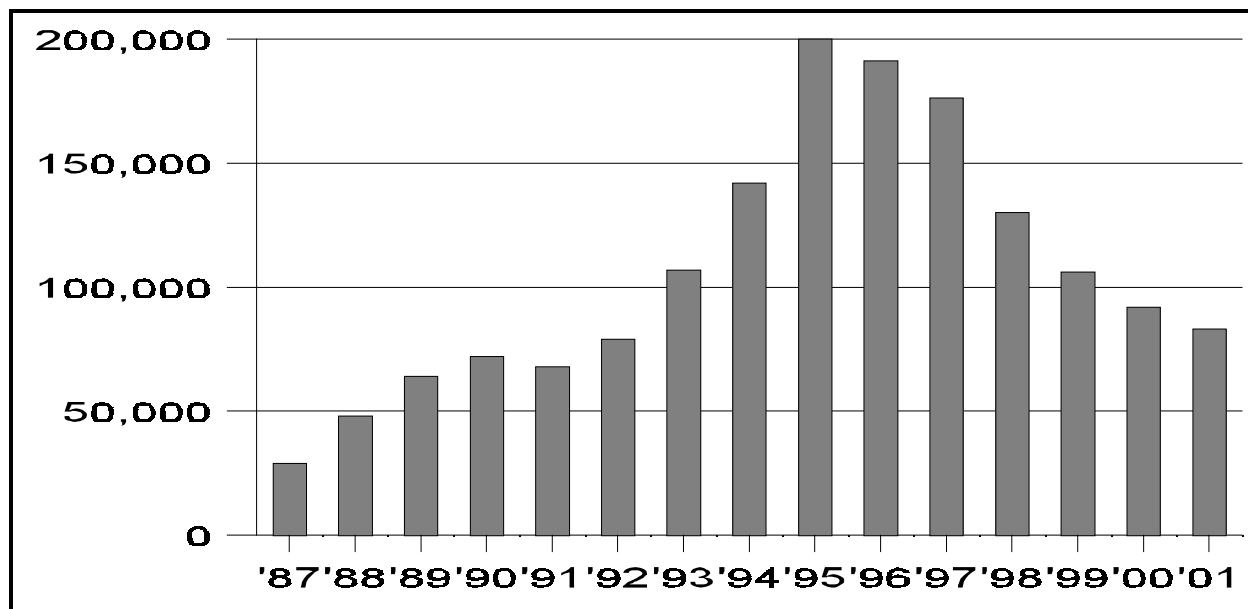
The NSRE surveyed adults 16 and over. Most soccer players are younger than 16, so soccer's growth is certainly understated. Soccer is a favorite sport of many of Hispanic and Latino origin, a fast-growing segment of the population. North Carolina's Hispanic and Latino population grew from 1.2 percent of the state's population in 1990 to 4.7 percent in 2000. (U.S. Census Bureau)

In-line skating, an activity not included in the NSRE, first appeared in the late 1980s. Participation grew phenomenally, peaking at 32 million participants in 1998. Since then, the in-line skating population has dropped, leveling off for now at about 29 million. (American Sports Data, Inc., 2001)

Personal Watercraft Use

Personal watercraft (PWC) use, often termed jet skiing, is a relatively new outdoor recreation activity made possible by jet water propulsion technology. PWCs have added a new dimension to boating with sharp turns, jumps and fast, thrilling rides. Because they do not have propellers, they can be used in shallow water and ocean surf that was not generally accessible to conventional boats. Nationally, about 20.3 million people jet ski. (NSRE, 2000)

PWC sales skyrocketed from 1987 until 1995, growing at 27.3 percent annually. Nationwide, sales peaked at 200,000 units in 1995. Since then, sales of new units have been in decline. In 2001, 83,000 new units were sold. Nationwide, an estimated 1,053,560 units are in use, approximately eleven percent of all registered boats. The number of PWCs in use has been relatively flat over the past four years, declining from a high of 1.1 million units in 1998. (Figure IV-2)

Figure IV-2. U.S. Personal Watercraft Sales, 1987-2001

Source: National Marine Manufacturers Association (<http://nmma.org/facts>)

As popular as PWCs have been with users, they have been equally unpopular with many others because of their interference with other boaters and fishermen and environmental concerns including noise and emissions. Opposition to PWC use has led to their being prohibited in some areas, including much of the Cape Hatteras National Seashore. Many states, including North Carolina (adopted in 1999, revised in 2000), have passed safety regulations in an attempt to reduce conflicts and accidents and regulate PWC use by addressing reckless behavior. Manufacturers are responding to concerns by manufacturing quieter and more environmentally friendly models.

The number of registered boats in North Carolina has increased almost 24 percent from 287,232 in 1992 to 355,421 as of January, 2002. The Wildlife Resources Commission does not keep separate figures for PWC registrations, but it is likely that at least eleven percent – or 39,096 – of these are PWCs. PWC rentals have become popular in coastal resort areas and larger lakes with marinas, so the opportunity exists for vacationers and others to enjoy the sport without owning a unit.

While jet ski use nationwide jumped 119 percent from 9.26 million people in 1994-95 to 20.31 million in 2000-01 (NSRE, 2000), the steady decline of new unit sales and the leveling off of the total units in use suggests that future increases in the number of participants will slow. The trend towards manufacturing larger multi-passenger models rather than the early singular use models has no doubt contributed to the increase in the number of jet skiers in recent years.

Table IV-5. Short Term Participation Trends

Outdoor Recreation Activity	Millions of Participants		Percentage Change
	1994-95	2000-01	1994-2001
Kayaking	2.58	7.29	182.56
Snowboarding	4.43	10.53	137.70
Jet Skiing	9.26	20.31	119.33
View or Photograph Fish	26.82	53.06	97.84
Soccer Outdoors	9.26	17.33	87.15
Sledding	19.99	31.22	56.18
View Wildlife	61.11	95.26	55.88
Backpacking	14.80	22.76	53.78
Day Hiking	46.68	70.62	51.29
Bicycling	56.10	84.60	50.80
Horseback Riding	13.94	20.95	50.29
Canoeing	13.76	20.63	49.93
Mountain Climbing	8.77	12.85	46.52
Running or Jogging	51.26	73.58	43.54
Developed Camping	40.53	55.73	37.50
Handball or Racquetball	11.02	15.07	36.75
Drive Off-Road	27.26	37.21	36.50
Rafting	14.88	20.22	35.89
Walk for Pleasure	130.66	177.00	35.47
Surfing	2.55	3.45	35.29
Visit Nature Centers	90.93	122.28	34.48
Visit Archaeological Sites	34.09	44.84	31.53
View Birds	52.83	69.26	31.10
Football	13.26	17.22	29.86
Family Gathering	120.97	156.78	29.60
Big Game Hunting	13.90	17.79	27.99
Cross Country Skiing	6.38	8.10	26.96
Rock Climbing	7.26	9.21	26.86
Attend Outdoor Concerts, etc.	66.89	84.75	26.70
Basketball Outdoor	24.96	31.28	25.32
Primitive Camping	27.35	33.88	23.88
Golfing	29.04	35.93	23.73
Small Game Hunting	12.69	15.51	22.22
Migratory Bird Hunting	4.19	5.11	21.96
Picnicking	96.04	116.54	21.35
Warmwater Fishing	39.86	48.10	20.67
Saltwater Fishing	18.54	22.08	19.09
Tennis Outdoors	20.70	24.59	18.79
Swimming in Natural Waters	76.30	89.59	17.42
Sailing	9.34	10.80	15.63
Rowing	8.24	9.42	14.32
Attend Outdoor Sports Events	93.02	106.25	14.22
Visit Historic Sites	86.43	98.62	14.10
Motorboating	45.93	52.27	13.80
Downhill Skiing	16.45	18.20	10.64
Baseball	13.18	14.47	9.79
Snorkeling or Scuba Diving	14.16	15.47	9.25
Visit Beach or Waterside	121.53	129.39	6.47
Anadromous Fishing	8.85	9.36	5.76
Pool Swimming	86.52	87.09	.66
Caving	9.22	9.25	.33
Sightseeing	110.86	110.90	.04
Waterskiing	17.48	17.30	(1.03)
Orienteering	4.70	4.26	(9.36)
Softball	25.51	22.46	(11.96)
Volleyball Outdoors	28.04	22.57	(19.51)
Windsurfing	2.15	1.73	(19.53)

Source: Cordell and Green.

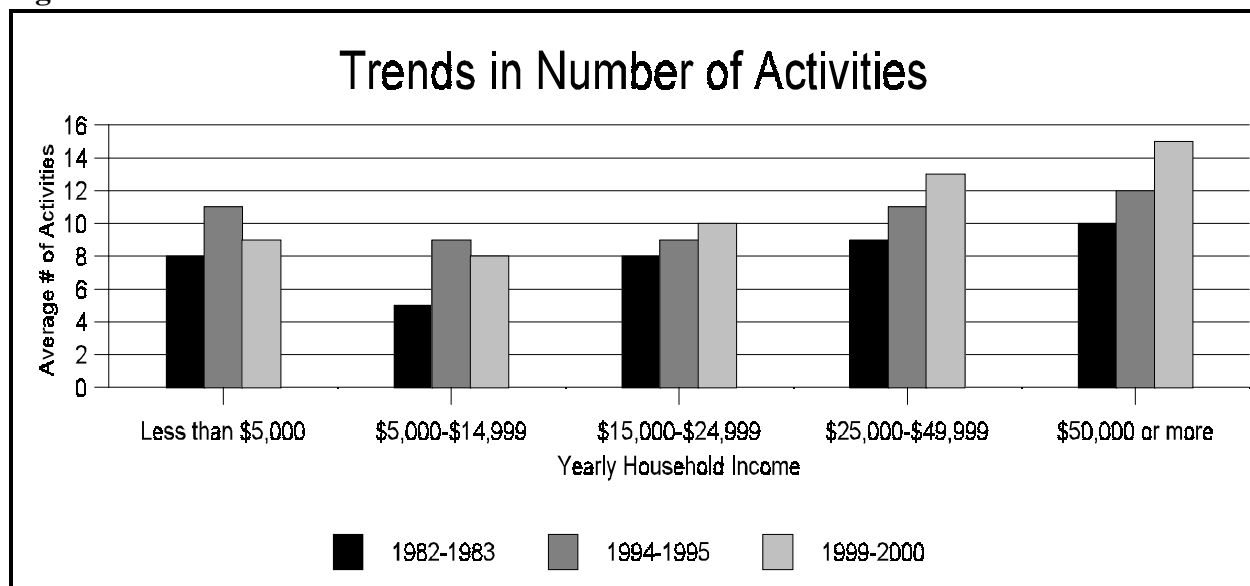
TRENDS IN NUMBER OF ACTIVITIES

For the past two decades, there has been an upward trend in the average number of activities in which a person participates annually. This trend is evidenced across all income groups. (Figure IV-3)

There are multiple reasons contributing to broader selection of activities. New activities such as jet skiing, in-line skating, orienteering, mountain biking and snowboarding attract participants. Equipment innovations and technological improvements induce people to try new activities. Females are increasingly participating in sports and fitness activities. Increased awareness of health and fitness issues prod people into participating. Advertisements solicit people to purchase recreational products and to travel. Rising incomes have also helped. The number of recreational choices available to people in the future will surely increase, so this trend of participating in more activities will likely continue.

The broadening of recreational choices will result in some overall increase in outdoor recreational participation as participants find and enjoy new activities. The trend will also result in additional activity participation shifts as some activities become relatively more popular and others relatively less popular. With leisure time constraints, some activities must be reduced if time is to be found to participate in others. A wide variety of outdoor recreational areas and facilities are needed to meet this broadening demand.

Figure IV-3. Trends in Number of Activities



Source: Cordell, Green and Stephens.

TECHNOLOGICAL INNOVATIONS

Technological innovations that effect outdoor recreation have and continue to be made. Innovation has produced a wide range of new products and materials as industries strive to develop new offerings to remain competitive. New applications of older ideas also impact outdoor recreation. Some innovations create fads; other innovations have long-term implications.

Jet skiing burst upon the scene in the 1980s after the development of jet water propulsion technology dramatically changed the nature of boating. New materials have resulted in strong and light-weight bicycles, camping gear and kayaks. New products like snowboards and in-line skates have provided the means to enjoy new activities. Mountain biking, snowboarding, in-line skating and street hockey activity have grown as a result of new products.

Running and walking shoes and hiking boots are lighter, more comfortable and more functional, resulting in less pain and more gain in participants for jogging, running, walking and hiking. Reflective clothing, fabrics that efficiently whisk away moisture, and warmer and lighter fabrics make people more comfortable outdoors. Tennis racquets and golf equipment have been improved by new materials.

Nightsopes, once prohibitively expensive, are improved and much more affordable than earlier models. Four-wheel-drive vehicles are common and allow convenient transportation to new areas of exploration. Simple, light-weight tents and freeze dried food have added convenience to camping. Portable electric generators make camping more appealing to some, less appealing to others. Cell phones and global positioning devices allow communication and provide additional safety in the great outdoors. Outdoor recreation information is increasingly available on the internet.

Technological changes also create shifts in consumer preferences that compete with outdoor recreation. Home theaters, video games, satellite and cable TV, and the rise in popularity of the internet compete with outdoor recreation for leisure time hours. Home treadmills, exercise bikes and cross trainers compete also, as does the expanding health club industry. Still, technological innovation has had an overall positive impact on the amount of outdoor recreation participation in the past, and this trend is expected to continue.

TERRORISM THREATS

The September 11, 2001 terrorist attacks on New York City and Washington, D.C. had an immediate and profound effect upon domestic and foreign travel. Both business and personal travel, particularly via air, dropped dramatically and has never fully recovered. Businesses that cater to travelers suffered. Hotel and motel vacancies rose and restaurants and attractions suffered as patronage declined.

Obviously, future terrorism cannot be predicted with any certainty. However, if people continue to be reluctant to fly or to vacation in high profile tourist areas, then some additional travel and vacation time can be expected to be spent nearer to home and at locations within a reasonable drive. North Carolina, conveniently located to much of the eastern United States and already a popular vacation state, could receive some increased out-of-state visitation as a result. According to the N.C. Division of Travel and Tourism, 84 percent of North Carolina's visitors use automobile transportation as their primary mode of transportation.

INCREASED FEMALE PARTICIPATION

Title IX (of the Federal Education Amendments of 1972) provided that "no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any education program or activity receiving federal financial assistance." In the two decades since its passage, massive increases in female participation in various interscholastic sports in high schools and colleges has taken place.

The National Federation of State High School Associations reports that young women comprised 42 percent of all high school athletes in 2000-01, a tremendous jump from only seven percent in 1971. Despite unmistakable progress, male participation in youth sports is still predominant. Additional opportunities for participation by women are still needed, but there are certainly other societal issues that contribute to the continuing gender gap in participation.

Some outdoor recreation activities continue to be male dominated. Men are almost twice as likely as women to fish, and five times as likely to hunt. Team sports continue to be more attractive to males, but women are gaining participants. Golf has a three to one male to female ratio, but tennis is nearly equal. Likewise, developed camping has a small gender difference. Primitive camping is much less popular with females. Personal safety issues may play a role in decreased interest in primitive camping.

Female participation in fitness activities has risen in recent years, and the number of women participants is nearly equal to men. For walking, the country's most popular outdoor recreation activity, the number of women participating is slightly higher than men. (NSRE, 2000)

With increased emphasis on youth and school sports and recreational opportunities for girls and women, the gender gap is expected to continue to decrease. Women that have grown up participating in sports and fitness activities are more likely to continue their participation later in life. They are also more likely to encourage their children – both male and female – to participate. Increased female participation in outdoor recreation is likely to continue and should result in increased demand for areas and facilities in the coming years.